

Appl. No. 10/816,015
Amdt. Dated May 8, 2006
Reply to Final Office Action of March 09, 2006

REMARKS/ARGUMENTS

This is responsive to the Final Office Action mailed on March 09, 2006. In the Office action claims 1-44 were rejected.

Claims 1 and 41 were objected to due to certain informalities.

Claims 1, 15, 17, 18, 23-27, 29, 30, 35-37, 39-41, 43, and 44 were rejected under 35 U.S.C. §102 (b) as being anticipated by Burke et al. (U.S. Patent No. 5,305,363, hereinafter "Burke").

Claims 2, 5, 8-10, 38, and 42 were rejected under 35 U.S.C. §103 (a) as being unpatentable over Burke in view of Richey et al. (U.S. Patent No. 4, 547, 892, hereinafter "Richey"). Claims 3, 4, 12-14, 16, and 28 were rejected under 35 U.S.C. §103 (a) as being unpatentable over Burke and Richey in view of Price et al. (U.S. Patent No. 2002/0085674). Claims 6, 11, 19, 31 were rejected under 35 U.S.C. §103 (a) as being unpatentable over Burke, Richey in view of Zunick (U.S. Patent No. 2, 340, 500, hereinafter "Zunick"). Claims 7, 20, and 32 were rejected under 35 U.S.C. §103 (a) as being unpatentable over Burke, Richey, Price and Zunick. Claims 21 and 33 were rejected under 35 U.S.C. §103 (a) as being unpatentable over Burke, Zunick, in view of Dawson et al. (U.S. Patent No. 5,467,377, hereinafter "Dawson"). Claims 22 and 34 were rejected under 35 U.S.C. §103 (a) as being unpatentable over Burke, Zunick, and Dawson.

Claims 1 and 41 have been amended to remove the informalities as pointed out by the Examiner. Claims 1-44 remain pending.

Claims define allowable subject matter over the applied art

The independent claims 1, 37, and 41 were rejected under 35 U.S.C. §102 (b) over Burke. Applicant respectfully traverses the rejection of independent claims 1, 37, and 41, under 35 U.S.C. §102 (b) as being anticipated by Burke. To anticipate a claim under 102, each and every element of the claim must be taught by the reference.

Applicant maintains that Burke does not disclose, teach or suggest the claim recitations of "a source controller for triggering one or more emitters in the one or more distributed X-ray sources for acquiring volumetric data by the one or more detectors", as recited in amended independent claims 1, 37, and 41 (emphasis added).

Examiner has referred to Col 3, lines 1-8 and Col. 3, lines 47-52 as a teaching for the source controller for triggering one or more emitters.

Appl. No. 10/816,015
Amdt. Dated May 8, 2006
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The text from Col 3, lines 1-8, in Burke states that:

In accordance with another more limited aspect of the present invention, the cathode assembly includes a multiplicity of electron emitting means arranged in an angular ring within the housing. **The electron beam moving means** includes means for selectively causing each of the electron emitting means to emit a beam of electrons which impact the anode surface to generate the x-ray beam. (emphasis added)

Applicant respectfully submits that though the above text discusses electron emitting means, it does not disclose, teach or suggest that a "source controller" as described in the independent claims of the Applicant's application is used to trigger the electron emitting means. Infact, the teaching here is that an **electron moving means** and not a "source controller" is used to cause the electron emission.

The text from Col. 3, lines 47-52, in Burke states that:

In accordance with another more limited aspect of the present invention, a means is provided for controlling the electron emitting means such that the generated beam of x-rays has one of at least two selectable different energies. (emphasis added)

Applicant respectfully submits that above highlighted recitation do not disclose, teach or suggest any aspect relating to "triggering of the emitters". The teaching in very general terms is that a means is used to control the emitters to generate X-rays of two different energies. The detailed description in Burke does not provide any details about the emitter triggering aspect. Infact, emitters are mentioned specifically only in col. 8, lines 20-25, where Burke states that:

An additional refinement may be obtained by heating the filament or, more generally, the electron emitter by a second cathode structure behind the emitter and accelerated by a more modest potential and a locally controlled grid in a similar manner to the main cathode structure.

Thus it appears that a cathode structure is used to trigger the emitters in Burke though this aspect has not been clearly described. And with respect to the grid control, Burke in column 7, lines 15-50, refers to a grid assembly for focusing the generated electron beam in a circumferential direction and radial direction. This results in the electron beam being stepped, or moved in other selected patterns, around the anode. But nowhere, does Burke disclose, teach or suggest the triggering of emitters, as recited in the independent claims 1, 37, and 41. The grid assembly and associated switching means of Burke are applied on the "generated" electron beam.

Applicant would like to submit that the recitation of a **source controller for triggering one or more emitters** as recited in independent claims 1, 37 and 41 is adequately supported in the specification, e.g., in paragraph [0021] of the Applicant's specification:

Appl. No. 10/816,015
Amdt. Dated May 8, 2006
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In the present stationary CT arrangements, the **radiation source controller** 16 may trigger one or more emitters in a distributed X-ray source at each instant in time for creating multiple projections or frames of measured data. In certain arrangements, for example, the X-ray **radiation source controller** 16 may trigger emission of radiation in sequences so as to collect adjacent or non-adjacent frames of measured data around the scanner.

And similar recitations in paragraph [0026]:

As shown in Fig. 2, in an exemplary implementation, the distributed X-ray source 30 may include a series of **electron beam emitters** 32 that are coupled to **radiation source controller** 16 shown in Fig. 1, and are triggered by the **source controller** during operation of the scanner.

Thus the Applicant respectfully submits that the independent claims 1, 37, and 41, are not anticipated by Burke under 35 U.S.C. §102 and therefore, are allowable. Claims 15, 17, 18, 23-27, 29, 30, 35- 36 depend directly or indirectly from claim 1, claims 39-40, depend from claim 37, and claims 43 and 44 depend on claim 41. These dependent claims are similarly allowable.

In view of the foregoing remarks, Applicant respectfully requests withdrawal of the rejections under 35 U.S.C. §102 (b).

Under 35 U.S.C. §103 (a) rejections different sets of claims as summarized above have been rejected over at least Burke in view of Richey; Burke and Richey in view of Price; Burke, Richey in view of Zunick; Burke, Richey, Price and Zunick; and Burke, Zunick, in view of Dawson.

Irrespective of what the secondary references teach or do not teach, they still do not overcome the deficiencies of Burke with respect to "**source controller for triggering one or more emitters**", as recited in independent claims 1, 37 and 41.

Applicants further submit that all the three independent claims 1, 37 and 41 have been distinguished with respect to Burke when discussing 102 rejections above. Each of claims 2-36 depends from claim 1, each of claims 38-40, depends from claim 37, and each of claims 42-44 depends from claim 41. Applicant believes that claims 1, 37, and 41 are in condition for allowance over Burke for the reasons discussed above, regardless of what the other references teach or do not teach.

In view of the foregoing remarks, Applicant respectfully requests withdrawal of the rejections under 35 U.S.C. §103 (a).

Summary

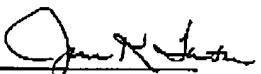
In view of the foregoing, Applicant respectfully submits that the application is in condition for allowance.

Appl. No. 10/816,015
Amdt. Dated May 8, 2006
Reply to Final Office Action of March 09, 2006

Favorable reconsideration and prompt allowance of the application are respectfully requested.

Should the Examiner believe that anything further is needed to place the application in even better condition for allowance, the Examiner is requested to contact Applicant's undersigned representative at the telephone number below.

Respectfully submitted,

By 
Jean Testa
Reg. No. 39,396
General Electric Company
Building K1, Room 4A60
Schenectady, New York 12301
Telephone: (518) 387-5115